

REMARKS

In view of the above amendments and following remarks, Applicant requests favorable reconsideration of the above-identified application.

Claims 32-38 and 40-47 are now pending in this application, with Claims 32, 46 and 47 being independent. By this Amendment, Applicant has cancelled Claim 39. Claims 32-38 and 40-47 have been amended. No new matter has been added.

Claims 32, 38, 41 and 44-45 stand objected to for informalities. Applicant has amended those claims to attend to the matter giving rise to the rejection.

Claims 32-37, 43 and 46-47 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2005/0099611 (Sogard '611). Claims 38 and 40 stand rejected under 35 U.S.C. § 103 as being unpatentable over Sogard '611 in view of U.S. Patent No. 6,118,527 (Jurca). Claim 42 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sogard '611 in view of U.S. Patent Publication No. 2003/0235682 (Sogard '682). Claims 44-45 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sogard '611 in view of U.S. Patent Publication No. 2001/0048514 (Taniguchi). Applicant traverses these rejections.

Applicant's invention, as recited in independent Claims 32 and 46, is generally directed to an apparatus having a mirror and a heat-radiation plate. The mirror has a reflection surface that reflects light and a rear surface located opposite to the reflection surface. The heat-radiation plate is arranged outside both the mirror and a passage area for light incident on the reflection mirror. In addition, the heat-radiation plate (1) faces the reflection surface, (2) is

spaced away from the reflection surface, and (3) is arranged nearer the reflection surface than the rear surface. The heat-radiation plate is cooled by a cooling mechanism.

Independent Claim 47 is directed to a method of fabricating a device using an exposure apparatus which includes a mirror and a heat-radiation plate generally similar to those recited in independent Claims 32 and 46.

Sogard '611 describes a system in which a channel 30 is arranged inside a mirror 20. A pipe 32 is arranged inside the channel 30 and receives a cooling fluid 34. Sogard '611 does not suggest arranging a heat radiation plate *outside* of the mirror to be cooled and placing that heat radiation plate outside a passage area for light incident on and reflected from the reflection surface.

Jurca merely describes a temperature detection unit for detecting the temperature of the mirror. Applicant submits that this patent fails to remedy the deficiencies discussed above with respect to Sogard '611.

Sogard '682 is cited in the Office Action as describing a heat-radiation member. Applicant submits, however, that the heat-radiation member 550A cited by the Examiner is actually a heat source that *heats* a non-illuminated region of an optical element. Consequently, that document does not describe a heat-radiation member used in cooling, as recited in the present independent claims. Thus, the publication fails to remedy the deficiencies discussed above with respect to Sogard '611.

Taniguchi is cited in the Office Action as describing a particular arrangement of a mirror barrel. Applicant also submits that this document fails to remedy the specific deficiencies discussed above with respect to Sogard '611.

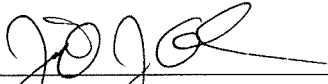
Accordingly, Applicant submits that Sogard '611, Jurca, Sogard '682, and Taniguchi, taken alone or in combination, fail to disclose or suggest at least the features of a mirror having a reflection surface that reflects light, a heat-radiation plate arranged outside the mirror and outside a passage area for light incident on and reflected from the reflection surface, the heat-radiation plate being spaced away from the reflection surface, and a cooling mechanism configured to cool the heat-radiation plate, as generally recited in each of the independent claims.

For the foregoing reasons, Applicant respectfully submits that the present invention is patentably defined by independent Claims 32, 46 and 47. Dependent Claims 33-38 and 40-45 are also allowable, in their own right, for defining features of the present invention in addition to those recited in independent Claim 32. Individual consideration of the dependent claims is requested.

Applicant submits that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowability are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,


Justin J. Oliver
Attorney for Applicant
Registration No. 44,986

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3800
Facsimile: (212) 218-2200
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